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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,936	03/06/2002	Rong-Chang Liang	26822-0002 P2	1503

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EXAMINER

TRA, TUYEN Q

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 01/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,936

Applicant(s)

LIANG ET AL.

Examiner

Tuyen Q Tra

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 12-22 and 26-36 is/are rejected.
- 7) ☒ Claim(s) 9-11 and 23-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 and 2 provisionally rejected under the judicially created doctrine of double patenting over claims 13 and 19 respectively of copending Application No. 09/942,532. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

2. Claims 18, 19, 20, 32, 34, 35 and 36 provisionally rejected under the judicially created doctrine of double patenting over claims 8, 10, 12, 13, 15, 16 and 14 respectively of copending Application No. 10/087, 527. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

3. Claims 1, 4, 6 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 10, 4 of copending Application No. 10/087,527. Although the conflicting claims are not identical, they are not patentably distinct from each other because both claim 1 claiming cells filled with electrophoretic fluid charged with particle pigment in dielectric solvent and sealed with sealing layer. However, claim 1 of application 10/092,936 does not disclose the cell individually sealed. Since individually seal over a whole seal are considered to be a method for sealing in the device, therefore it is obvious to one of ordinary skill in the art at the invention was made to choose individual seal over the whole seal as mater of design choice.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-6, 18 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Cosmiskey et al. (U.S. 6,327,072 B1).

a) With respect to claims 1 and 18, Cosmiskey et al. discloses electrophoretic display device in Fig. 1 comprising of two electrode plates (items 18, 24), plurality of the cells (item 10, 12) having side walls (item 22) wherein the cells are filled with an electrophoretic fluid comprising of charged particles dispersed in a dielectric solvent or solvent mixture and the cells are individually sealed by a sealing layer (item 14) which can be coated with a polymer, and the polymer can be insoluble in a suspending medium contained within a cavity defined by the cell walls (col. 2, lines 19-22).

b) With respect to claim 2, Cosmiskey et al. further discloses in the Figure wherein the cells are partially filled with the electrophoretic fluid particles.

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- c) With respect to claim 3, Cosmiskey et al. further discloses wherein the sealing layer (item 14) forms a contiguous film on the fluid and is in intimate contact with both the fluid and the peripheral of the walls (item 22) of the cells (item 10, 12) that are not covered by the fluid.
- d) With respect to claim 4, Cosmiskey et al. further discloses wherein sealing layer (item 14) extends over the top surface of the side walls (item 22) of the cells.
- f) With respect to claim 5, Cosmiskey et al. further discloses wherein polymeric sealing layer (item 14) forms a contiguous film on the top of the sealed cells (item 10, 12).
- g) With respect to claim 6, Cosmiskey et al. further discloses wherein the sealing layer is formed from a composition comprising a material selected from the group consisting of polyvalent acrylate or methacrylate, cyanoacrylates, polyvalent vinyl including vinylbenzene, vinylsilane, vinyl ether, polyvalent epoxide, polyvalent isocyanate, polyvalent allyl, and oligomers or polymers containing crosslinkable functional groups.
- h) With respect to claim 32, Cosmiskey et al. further discloses wherein adhesive layer is a pressure sensitive adhesive, a hot melt adhesive, a heat, moisture, or radiation curable adhesive (col. 14, lines 4-6).

Claim Rejections - 35 USC § 103

- 6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
- 7. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cosmiskey et al. (U.S. 6,327,072 B1) as applied to claim 1 above.

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Cosmiskey et al. discloses electrophoretic display device comprising of a sealing layer (item 14) which is coated with an polymeric layer. However, Cosmiskey et al. does not implicitly disclose that the sealing layer is selected from composition comprising a material selected from the group consisting of polyvalent acrylate or methacrylate, cyanoacrylates, polyvalent vinyl including vinylbenzene, vinylsilane, vinyl ether, polyvalent epoxide, polyvalent isocyanate, polyvalent allyl, and oligomers or polymers containing crosslinkable functional groups, surfactants, antioxidants, initiators, catalysts, crosslinkers, thickeners, polymer binders, pigments, dyes and fillers; wherein the filler is silica, CaCO₃, BaSO₄, TiO₂, metal particles and their oxides or carbon black.

The use of general material for sealing layer such as polymer selected from the group consisting of polyvalent acrylate or methacrylate, cyanoacrylates, polyvalent vinyl including vinylbenzene, vinylsilane, vinyl ether, polyvalent epoxide, polyvalent isocyanate, polyvalent allyl, and oligomers or polymers containing crosslinkable functional groups, surfactants, antioxidants, initiators, catalysts, crosslinkers, thickeners, polymer binders, pigments, dyes and fillers; wherein the filler is silica, CaCO₃, BaSO₄, TiO₂, metal particles and their oxides or carbon black are well known in the art of display device for purpose of lowering manufacture cost and labor as well as preventing device from breakage. Therefore, it would have been obvious to one skill in the art to make the sealing layer from general material such as polyvalent acrylate or methacrylate, cyanoacrylates, polyvalent vinyl including vinylbenzene, vinylsilane, vinyl ether, polyvalent epoxide, polyvalent isocyanate, polyvalent allyl, and oligomers or polymers containing crosslinkable functional groups, surfactants, antioxidants, initiators, catalysts, crosslinkers, thickeners, polymer binders, pigments, dyes and fillers; wherein the filler is silica,

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CaCO₃, BaSO₄, TiO₂, metal particles and their oxides or carbon black for purpose lowering down the cost and preventing mirror from breakage.

9. Claims 12-17, 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cosmiskey et al. (U.S. 6,327,072 B1) as disclosed in claim 4.

Cosmiskey et al. discloses an electrophoretic display device, but does not disclose the thickness of the sealing layer or electrode layer that contribute to size of the housing.

Although the Cosmiskey et al.'s device does not teach the exact the top surface of the sealing layer is at least 0.01 μ above top surface of the cell walls or thickness of the sealing layer about 0.1 μ -50 μ as that claimed by Applicant, these thickness of the sealing layer or thickness of sealing layer and electrode layers contribute the shape or size differences are considered obvious design choices and are not patentable unless unobvious or unexpected results are obtained from these changes. Additionally, the Applicant has presented no discussion in the specification which convinces the Examiner that the particular of the sealing layer thickness or sealing layer and electrodes thickness of the cells is anything more than one of numerous shapes or sizes of the cells a person of ordinary skill in the art would find obvious for the purpose of providing support. It appears that these changes produce no functional differences and therefore would have been obvious.

10. Claim 33-36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cosmiskey et al. (U.S. 6,327,072 B1) as applied to claim 32 above.

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a) With respect to claim 33-35, Cosmiskey et al. discloses electrophoretic display device comprising of an adhesive layer. However, Cosmiskey et al. does not implicitly disclose that the adhesive layer is formed from a material selected from a group consisting of acrylics, styrene-butadiene copolymers, styrene-butadiene-styrene block copolymers, styreneisoprene-styrene block copolymers, polyvinylbutyal, cellulose acetate butyrate, polyvinylpyrrolidone, polyurethanes, polyamides, ethylenevinyl acetate copolymers, epoxides, multifunctional acrylates, vinyls, vinylethers, and their oligomers, polymers, and copolymers. The use of general material for adhesive layer such as selected from the group consisting of acrylics, styrenebutadiene copolymers, styrene-butadiene-styrene block copolymers, styreneisoprene-styrene block copolymers, polyvinylbutyal, cellulose acetate butyrate, polyvinylpyrrolidone, polyurethanes, polyamides, ethylene vinyl acetate copolymers, epoxides, multifunctional acrylates, vinyls, vinylethers, and their oligomers, polymers, and copolymers are well known in the art of display device for purpose of lowing manufacture cost and labor as well as preventing device from breakage.

Therefore, it would have been obvious to one skill in the art to make the adhesive layer from general material such as acrylics or styrenebutadiene copolymers or styrene-butadiene-styrene block copolymers or styreneisoprene-styrene block copolymers or polyvinylbutyal or cellulose acetate butyrate or polyvinylpyrrolidone or polyurethanes or polyamides or ethylene vinyl acetate copolymers or epoxides or multifunctional acrylates or vinyls or vinylethers or and their oligomers or polymers or and copolymers for purpose lowing down the cost and preventing mirror from breakage.

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b) With respect to claim 36, Cosmiskey et al. discloses electrophoretic display device comprising of a sealing layer and electrode layer with adhesive layer in between; however, Cosmiskey et al. does not teach the sealing layer and adhesive layer are formed from different material.

Since the adhesive layer function as an adhesive material, the selection of the adhesive layer the same material as that of sealing layer is seem as design experience upon the environment of use to ensure optimum performance. Therefore, it would have been obvious at the time the invention was made to a person having skill in the art to use adhesive layer the same material as that of sealing layer for matter of design choice.

Allowable Subject Matter

11. Claims 9-11 and 23-25 are allowed.

The reason for the indication of allowable subject matter is that sealing layer is in contact with the side walls of said cells and the top surface of the cell walls is at least about 0.01μ (micrometer) above the top surface of the electrophoretic fluid disclosed in the claims is not found in the prior art.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (703) 306-5712. The examiner can normally be reached on Monday to Friday from 8:30am to 6:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps, can be reached on (703) 308-4883. The fax number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Examiner: Tuyen Tra

Date: January 24, 2003



Huy Mai
Primary Examiner